Radio As it Was

Training Licensed Commercial Radio Operators

BY RONALD R. THOMAS

It was the best of times, and it was the worst of times. It was the Great Depression of the 1930's, and it was the golden age of radio.

Being a licensed commercial radio operator in the 1930's gave a man a chance for a job in a high-tech, glamour industry. It also offered the possibility for travel and adventure. It was the type of job sought after by many, but one that required specialized training and licensing.

Licensed Commercial Radio Operators

The requirement for licensed commercial radio operators existed by Federal law. In part, the law existed to address the U.S. Government obligation under international radio treaties and conventions. The law also existed because of technical realities that included the fact that radio equipment in the 1930's was complex to operate, frequency stability could be a problem, and International Morse Code was widely used for long distance communications. All of these technical and legal factors helped to generate the need for radio operators. The licensing requirement ensured that radio operators met certain minimal standards of technical and operational competence.

In the U.S., the "tickets to ride" were the First Class Commercial Radiotelephone and the Second Class Commercial Radiotelegraph Operator's licenses. Both licenses required passing a written theory test. In addition, the radiotelegraph license required passing a sending and receiving test in International Morse Code. Actually, the term operator's license was somewhat of a misnomer since operators also frequently performed maintenance and installation work.

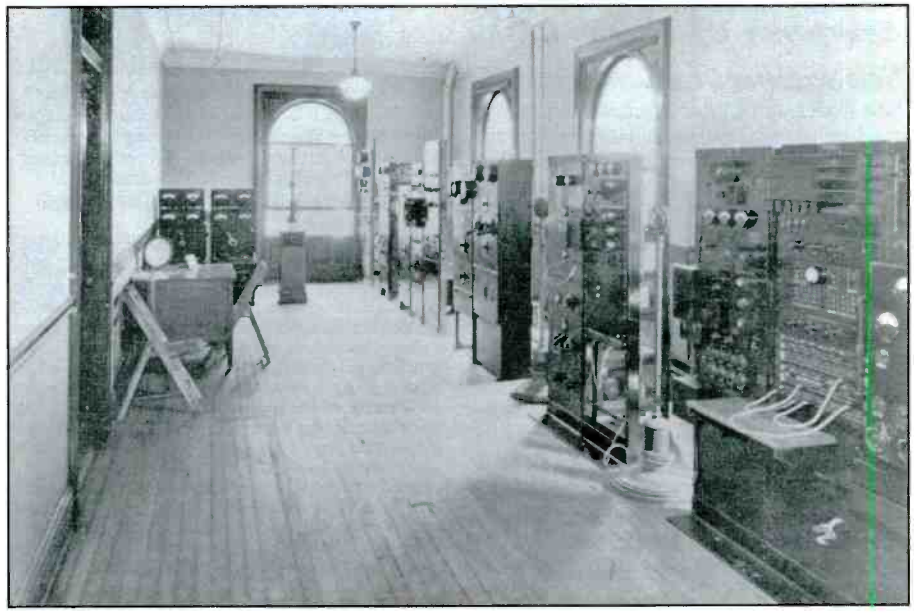
Training

By the mid-1930's radio was a dynamic industry, even in the midst of the great depression. There were 2,500 American ships equipped with radiotelegraph equipment, and there were extensive land based stations devoted to maritime communications. There were also 633 commercial radio broadcasting stations, and others were associated with the commercial aviation industry. All of these stations required licensed commercial radio operators.

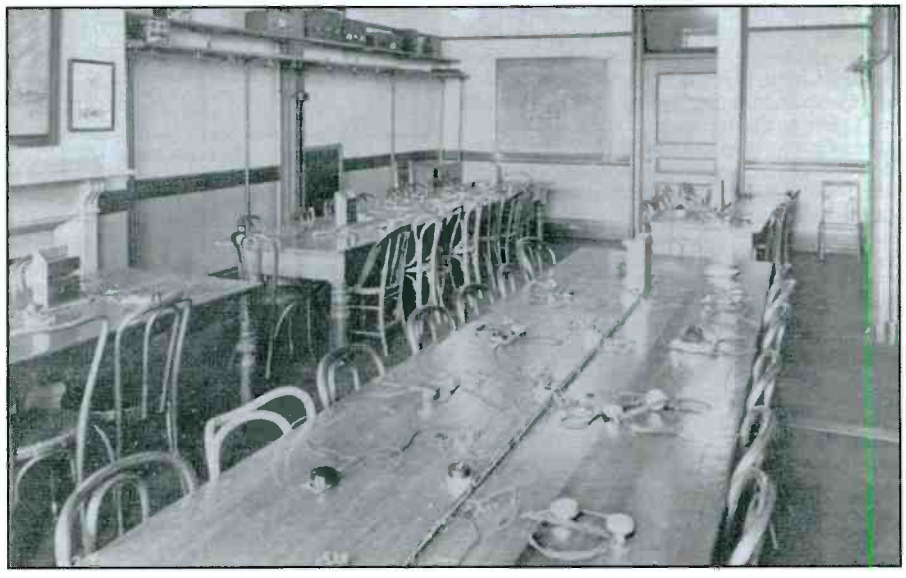
While some radio operators received their commercial operator's licenses through self-study, many individuals received their training at commercial radio schools. In the 1930s, a number of these schools were in existence. The Massachusetts Radio and Telegraph School in Boston, Massachusetts is illustrative of the type of school then in existence as well as the type of training provided by these schools.

Mass. Radio was established in 1899, as the Boston School of Telegraphy to train operators for the telegraph industry. Over the years, it expanded its operations to train men for the rapidly emerging field of radio communications.

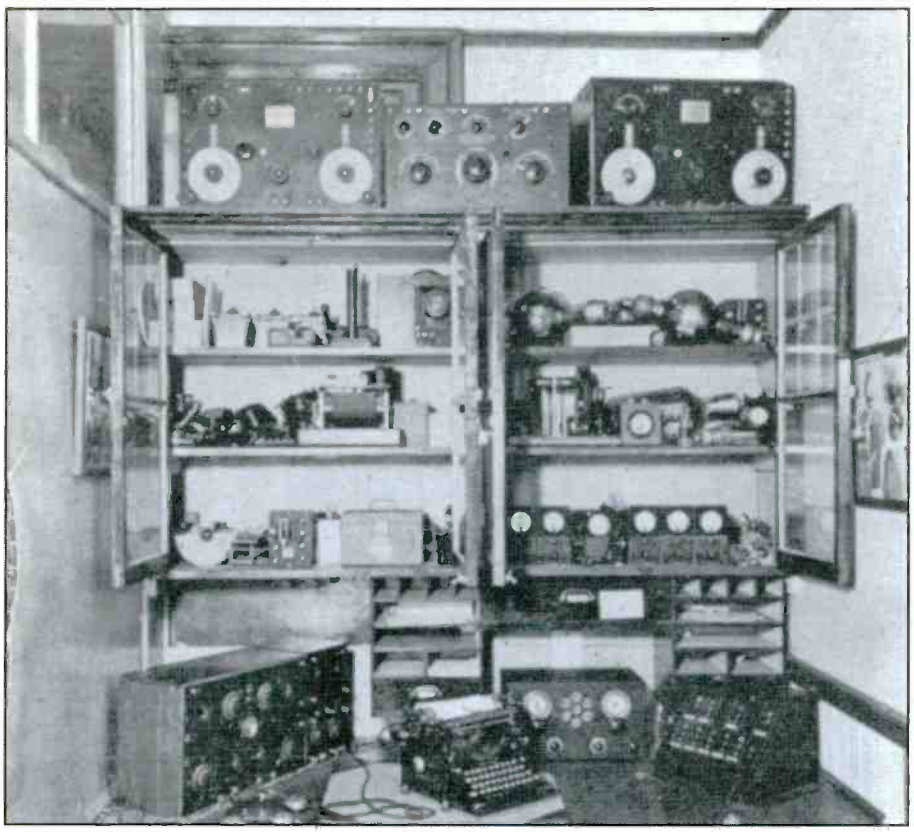
By 1937, Mass. Radio occupied five large rooms in a building at the corner of Boylston and Washington Streets in downtown Boston. The school offered a nine-month daytime program and a 16-month evening program. The daytime program ran from 9 a.m. to 1 p.m., Monday through



Main Radio Laboratory at Massachusetts Radio School. All this equipment is wired, running, and used by the students under supervision of instructors.



Intermediate Code Room-Advanced Lecture Room.



Commercial Receiving Room and testing apparatus.

Main Radio Service and Repair Laboratory.

Friday; the evening program ran from 7 p.m. to 9 p.m. on Monday, Wednesday, and Friday. Both programs train students for the First Class Commercial Radiotelephone and Second Class Commercial Radiotelegraph Operator's licenses.

In 1937, the tuition for the daytime program was $25 per month, or $6.25 per week. The tuition for the evening program was $12 per month, or $3 per week. Students could attend classes on a "pay as they went" basis. This was an important factor to most students during the depression of the 1930s.

In the daytime program, new classes for beginners started every two months. During the first two months of schooling students had two periods of theory, two periods of code work, and a hand-sending period each day. They received training in electricity, magnetism, electrical circuits, radio phenomena, and fundamental radio principles. Students also learned to send and receive International Morse Code at a rate of 15 words per minute.

Students then graduated to seven months of advanced training, where they learned advanced radio and electrical theory. Also,

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one month of practical radio laboratory work and one month of practical radio service and repair was included in this advanced section, and students increased their International Morse Code sending and receiving speed to 20 words per minute.

The school had a radio laboratory equipped with transmitters, receivers, audio, and other equipment. It also had rooms equipped for learning to send and receive International Morse Code. Other rooms were used for general classroom instruction.

The evening program was patterned after the daytime program and differed primarily only in the hours of study and the length of time required to complete the program. However, the evening program did not include the one month practical service course that was included in the daytime program.

The instructors were all experienced individuals who had formal training and practical experience in the radio field. Like their students, they could be described as well groomed, intelligent, serious, and determined.

Students

While many scholars came from the Boston and New England area, others came from various cities in the U.S., and some even came from foreign countries as far away as Australia. Word of mouth was how many of the students heard about the school; although the school did some formal advertising to attract students.

Those who lived in the Boston area could commute to class each day. In 1937, students from outside the local area could obtain room and board near the school for approximately $10 per week.

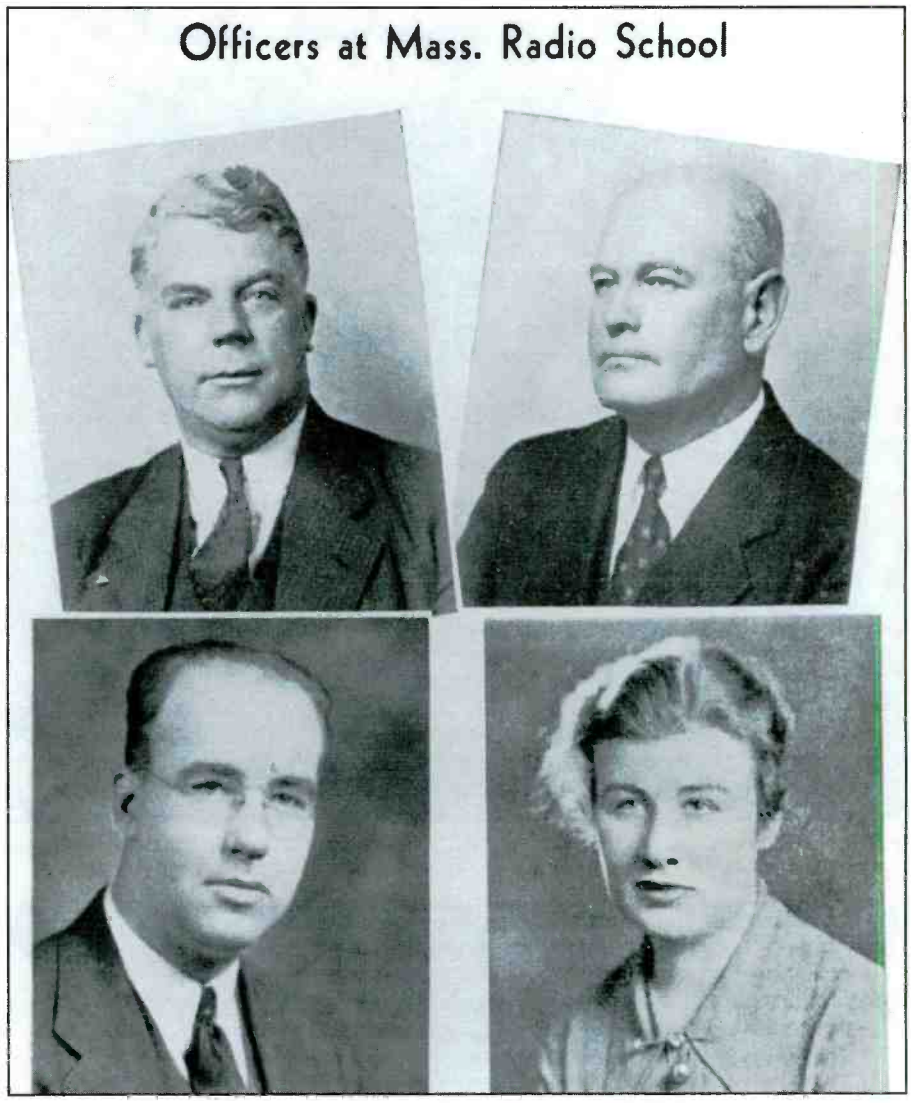
Many students worked in chain restaurants in return for meals and money; others found work running elevators, as night telephone operators, gas station attendants, salesmen, and in other jobs. Even the daytime program permitted some part-time employment.

Some students had experience as amateur radio operators, while others were complete beginners. The school program, however, presumed no prior knowledge of radio.

The school encouraged attendees to prepare for their Second Class Commercial Radiotelegraph Operator's licenses to first obtain an amateur radio license. This was done to help familiarize students with how the examinations were conducted and to minimize "stage fright" when they took the test for their commercial license. Also, thanks to amateur radio, many friendships made at the school lasted for many years.

Prior to graduation, the school arranged for the students, a few at a time, to visit radio activities in the Boston area. They had the opportunity to spend several hours with the operators on duty to observe their normal work activities first hand.

The school took an active interest in its graduates and their activities after graduation, as successful graduates were a source of pride to the instructors. Also, these graduates demonstrated the training capabilities of the school to prospective new students and potential employers.



Officers at Mass. Radio School in the 1930's. Top (left) G. R. Entwistle, President; Top (right) R.F. Trop, Treasurer; Bottom (left) C.A. Kelleher, Supt. Evening School; Bottom (right) Gladys I Hunt, Secretary.

Employment

In the early 1930's employment opportunities for newly licensed commercial radio operators were rather limited. A newly licensed commercial radio operator took licenses in hand and made the rounds of the radio stations, ship yards, and any other sources of potential employment.

By 1937, employment opportunities had begun to improve significantly for licensed commercial radio operators on land, at sea, and in the air. Many students were hired directly out of school and avoided having to pound the pavement in search of work. At this time, commercial broadcasting and maritime radio stations offered significant employment opportunities. However, positions also existed with the aviation industry, police radio departments, the U.S. Government, and other organizations.

Perhaps one of the most glamorous jobs was employment as a radio operator on the Pan American Clippers that were flying across the Pacific Ocean in the late 1930s. Positions as radio operators with commercial radio broadcasting stations and on freighters and passenger ships also provided their share of glamour and excitement.

The salary for newly licensed commercial radio operators in 1937 was approximately $25 per week. Jobs on board ship typically included free room and board. Experienced personnel might earn nearly $200 per month.

While some operators stayed with the same company, many changed jobs in search of more money or different employment opportunities. For example, after a stint at sea an operator might decide to look for a land-based job. The initial glamour of jobs on ships and aircraft would eventually wear off once the operator realized how

much time had to be spent away from home and family.

End of an Era

A number of factors led to the elimination of schools training licensed commercial radio operators, and inevitably even the need for many of these operators. World War II produced a tremendous number of trained radio operators who could qualify for commercial operators' licenses once they returned to civilian life. Also, WWII provided money for veterans to pursue their education at colleges and universities, rather than radio schools.

The introduction of television broadcasting in the late 1940's and early 1950's called for licensed commercial radio operators with more extensive training. During that period there was a significant increase in the demand for personnel to work on two-way radio equipment installed in police and commercial vehicles. While these positions required a Second Class Commercial Radiotelephone Operator's license, the work actually involved the installation and repair of two-way radio equipment. Many radio schools were not equipped to provide these types of training.

In the commercial radio broadcasting industry, the equipment became more stable and reliable. The legal requirement for licensed commercial radio operators continued long after the technical need for these personnel. Many radio stations in the 1950's and 1960's had licensed commercial radio operators whose primary responsibility was to hang their licenses on the wall and just be present. More than one such operator, including the author, used those jobs to help finance a college education and to provide study time.

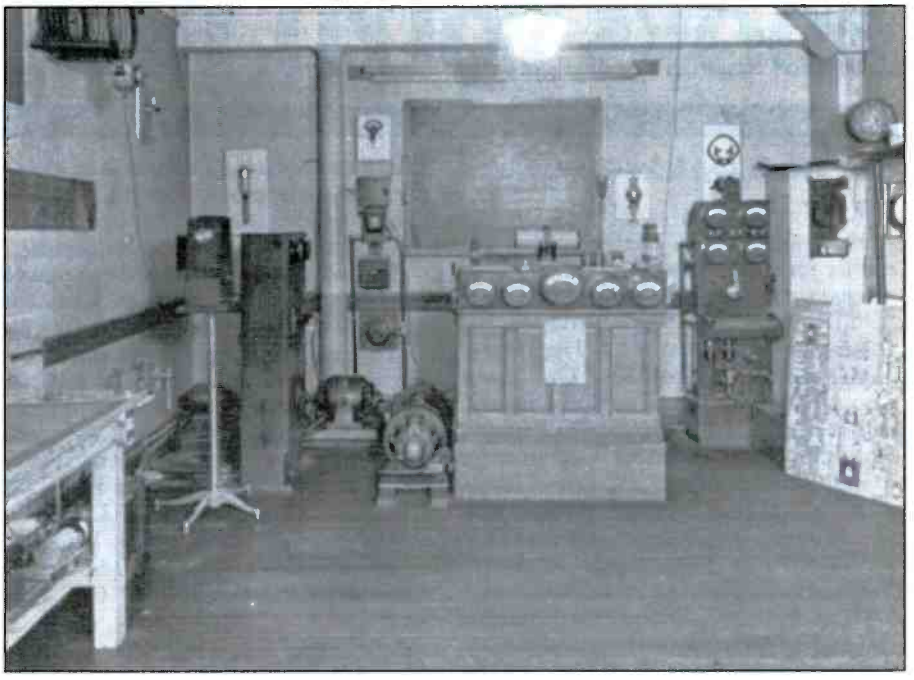
In the 1980's, the First Class Commercial Radiotelephone Operator's license was eliminated, and the commercial radio and television industry was deregulated. This significantly affected the requirement for licensed commercial radio operators.

During the 1990s, the requirement for licensed commercial radiotelegraph operators on ocean going ships will be eliminated. Voice communications via satellite will be one of the primary methods of communications. Thus, the era of the licensed commercial radio operators continues to rapidly draw to a close. It is an era that will long be remembered by those who participated in it.

Acknowledgment

Technical assistance for this article was provided by Almon A. Gray, W1KA (Deceased), who graduated from the Massachusetts Radio and Telegraph School in 1930. He served as a flight radio officer for Pan American from 1935 to 1937. He then went on to be the Assistant Superintendent of Communications for Pan Am Pacific Operations.

Editor's Note: Alice Brannigan is on vacation. ■



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